As to the *Turky* way of dreſſing *Leather*, it is to be obſerv'd, that their Leather is nothing ſo ſtrong and ſerviceable as that in *England*; an aſſured proof whereof is the Wearing. And though it be commonly reported, that the Leather in theſe parts, though thin and ſupple, will hold out water; yet this is to be underſtood, that the Turks in their winter-boots, between the lining and the leather, put a Sear-cloth, which being curiouſly ſow'd in the ſeams, will keep out water, though you put them in it for divers hours together. In cleaning of their leather, they uſe Lime and *Album Græcum*; and inſtead of Barks of trees, they employ *Valonia*, a ſort of acorn growing on the Oakes. I am perſuaded, that our Acorns in *England*, if they could be ſpar'd for it, would perform the like effect, and perhaps better; ſeeing that many times the *Valonia* burns the Leather ſo much as to make it little ſerviceable; whereas our acorns are probably more temperate, and ſo might better ſerve the turn.

An Accompt of two Books.

I. Vini Rhenani, imprimis BACCARACENSIS, *Anatomia Chymica, á* Joh. Davide, Portzio *Phil. et Med. D. Heidelbergæ*, 1672. *in* 12°.

THis Author treateth in this Book of the Soile proper for Rhiniſh Wine; of the kinds of that Vine and Grape; and of the Muſt, Wine, Spirit, Tartar, Vinegar, and particularly of the two Salts, the *Acid* and *Alcali*, as the chief Ingredients of Wine, and according to *Tachenius*, of all natural things.

Speaking of the fertility of the *ſoil* proper for Vines, and diſcourſing of the Nitrous Salt coming down in rain and ſnow, he delivers a way of collecting that Salt; of which we leave the skilful to judge upon the reading of the Book.

The *Grape* he affirms to be compounded of an Acid and a prevalent Alcali; obſerving, that grapes that are thin-skin'd grow ſooner ripe, and thrive even in a temperat climat; and taking alſo notice, that ſtruck with hail when they are big and begin to ripen, they harden and never grow full ripe.

Having;

The Royal Society is collaborating with JSTOR to digitize, preserve, and extend access to *Philosophical Transactions (1665-1678)*. www.jstor.org

Having diſcourſed of the way of preparing Veſſels for tunning up of wine; he is very particular in the matter of the Working of wine: Where he diſtinguiſheth between *Efferveſcence* (which alone he allows to be in Wine) and *Fermentation*; the latter being to him nothing elſe, than an Action and Reaction of the internal parts of the Acid and Alcali, by which the Spirits are ſeparated *without* Precipitation; whereas by Efferveſcence he ſaith there are no Spirits ſeparated, and though therein be alſo an action and reaction, yet, in his opinion, 'tis done *with* a Precipitation: ſo that, according to him, all Fermentation is made with an Efferveſcence, but not *vice verſâ*; he alſo affirming, that there may be an Efferveſcence between two Acids, when their particles are very active and very ſharp or when a ſtronger is poured on a weaker. Where he adds the manner, how the Muſt doth *efferveſcere*; viz. by the action of the Alcaliſate parts upon the Acid ones, which they ſubdue; whereupon the Efferveſcence ceaſeth, viz. when that Alcali is altogether ſatiated by the Acid.

Here he takes notice of that Efferveſcence obſerv'd in Wine at the time of the bloſſoming of Vines; and is of opinion, that it is cauſed by the Heat, which being at that time more intenſe works upon the ſaid two Salts, and opens them, and ſo induceth a new Efferveſcence.

After this he teaches the way of making *Muſt*, before the Wine works, either by it ſelf, or by boyling it up. *By it ſelf*, when 'tis ſo cloſe veſſel'd up, that it cannot work; which is call'd *Stum-wine*, a liquor that extreamly affects and rends the brain, by reaſon that the Salts, that were not before ſet at liberty to work, being now open'd in the Stomack, do ſend up abundance of thoſe pungent ſteams, ſo grievouſly afflicting the brain. *By Boyling*, when they take ſtrong Veſſels not quite fill'd, putting them into a cellar, wherein they make firſt a mild fire, and then increaſe it, and after a while leſſen it, that ſo the boyling may ceaſe by little and little of it ſelf; which is perform'd in 36 or 40 hours, according to the bigneſs of the veſſel. Here the Wine-boylers, inſtead of common candles, (which would melt by the heat) do ſlit Beech-wood dried and lighted by which they alſo find, when the Muſt is boyled e-

nough

nough, thoſe lights burning very dim as long as 'tis not enough, by reaſon of the abundance of ſteams choaking the light; but burning clear, when it hath boiled enough. About 7 or 8 dayes after the Muſt hath been thus boyled, it begins to work; after which working 'tis call'd Wine.

They prepare another kind of boyled Wine, by boyling the Muſt to half, and then they leave it ſo, or put into it, whilſt boyling, roots and herbs, according to the ſeveral uſes they deſign it for; as *Elechampane*, *Worm-wood*, *Cardus benedictus*, *Centory*, *Roſemary*, *Sage*, *Baum*, *Orang pills*, but eſpecially *Juniper-berries*. Being thus prepar'd, it works afterwards more ſlowly.

If the boyled Muſt by two violent an Effervеſcence caſt out the Lee (by which it grows vappous or dead,) they ſtop it by ſome fatty ſubſtance, as with freſh un-ſalted butter put upon a vine-leaf, or by freſh lard applied to the mouth of the veſſel, whereby the furious acid parts meeting with an alcali, and being ſaturated thereby, retire and deſcend again.

There being two ſorts of this wine, Reddiſh and White, he notes, that the Tincture of the Red is taken away by Sulphur kindled; the Alcalizat colour, got out of the mark or husks, being precipitated by the Acid Sulphur. Sulphur they make alſo uſe of to keep their wines, as they alſo do of Nutmegs, inſtead of Sulphur.

Diſcourſing of the *Baccharach*-wine in particular, he notes, that it differs from other Rheniſh wines in colour, odor, taſte and virtue. After its working it hath firſt a luteous colour, which they render limpid by *ichthyocolla* (being very Alcalical) cut, and kept infuſed in rain-water for 10 or 12 hours; and then torn into ſmall pieces, and ſo put into ſome Wine, and therewith ſhaken twice every day, till it be quite diſſolved; which is done in 6 or 7 dayes. When diſſolv'd, they percolate it through a ſive by powring a little wine upon it, and thus percolated they pour it out of one veſſel into another until it foam, and then they pour it into the wine to clarify it; ſome adding ſand or powder'd Venice-glaſs (meer Alcalies,) whereby, as heavy bodies, the tartareous feces go to the bottom. When they pour this ſolution into the Veſſel, they uſe a ſtick, with a

little

little board perforated at the end of it, whereby they agitate and beat the Wine in the Veſſel, and ſo render it clear, which it will be after 4 or 5 dayes; and then they veſſel it out into other veſſels.

As for the *Smel*, that wine is very fragrant, muſcatellin and aromatic. Though there be one ſort, that is ranck (*hircum olens*, Germanicè *Bruntzer*,) which he ſaith cannot be imputed to the Veſſel, *nor* the kind of Vine alone, *nor* to the Earth alone, there being gather'd, in all vintages, out of the ſame Vine-yard and from the ſame kind of Vine-ſtock, a grape which hath none of that ſmell: But this ſmell not being perceived before the Working, he takes the cauſe of it from that Effervеſcence, whereby the Alcali hath a dominion over the Acid; this urinous ſmell being to the Author nothing but a meer Volatil Alcali, and the Effervеſcence, by reaſon of the copiouſneſs of that Alcali in this kind of wine, during the longer. But that this ſmell is ſometimes ſo rank in one and the ſame Vine-yard, ſometimes not, he imputes to this, that in ſome years and ſoils, the ſoyl is more impregnated with an Alcaliſat ſalt, which the Air abounds with at one time more than an other. This Alcaliſat odor is loſt by tranſvaſation, that ſalt being thereby ſteam'd away.

The *Taſte* of Baccharach-wine is generally very grateful; and for its Virtue, it is more inciſive and diuretick, more ſtomachical and cardiacal, quickning the motion of the Spirits and exhilarating above the reſt. Where he takes occaſion to give an account of *Drunkenneſs*, which, in his opinion, is thus cauſed; viz. That the Bloud is circulated in the arteries more ſwiftly than it can be received into the Veins; whence comes a Giddineſs and Stupefaction, which is frequently attended by a head-ach, from a forcible diſtenſion of the veſſels.

Proceeding to the *Spirit of Wine*, he declares, that Spirits are nothing elſe but the fluors of Salts, or Salts reſolv'd in their phlegme; Salts being nothing but Spirits concentred. Where he obſerves, that from ſweet wines, as the Greek, Muſcadin, *&c.* a leſs quantity of Spirits is obtained by diſtillation, than from Rheniſh, quantity for quantity. He alſo taketh notice, among

mong the divers wayes of rectifying Spirit of wine, of that of doing it *without fire*, viz. by an intenſe Cold, congealing the phlegm, and forcing the Spirit into the midſt; as alſo of that of adding a fix't Alcali to the Spirit of wine, whereupon the Alcali, which is empty, will imbibe the phlegm, and ſo ſink with al; whereupon the Spirit may be decanted, leaving the phlegm at the bottom.

Further, he obſerves, that Spirit of wine is, as 'twere, the Oyl diſſolved in its eſſential phlegm, which ſolution is made in the working; every fermented Spirit being, to him, a diſſolved Oyl; ſeeing that upon waters being powred on rectifyed Spirit of wine, it ſuddenly grows lacteous, juſt as a Roſin diſſolved. It hath a power of diſſolving all Sulphurs, whether fixt or volatil; and highly rectifyed Spirit imbibes Oyl.

He adds, that out of Spaniſh and other ſweet wines leſs Oyl is drawn, than from Rheniſh, and he refers Oyls to acids, becauſe they are corroſif. He ſaith alſo that a purer and finer Oyl is diſtilled out of Rheniſh wine, than out of other wines; which he affirms to be of excellent virtue, a great cordial, and to be preferr'd to the famous tincture of Pearl and Coral.

Hence he goes on to the *Tartar*, which he ſaith is precipitated by the Effervescence or conflict of the Acid and Alcali, and is condenſed into a cryſtallin and ſtony matter, conſiſting of an inflammable Sulphur (which is an acid) and a fixt Salt. Here he takes notice, *that* the Tartar of Rheniſh Wine and of that of *Montpelier* is preferable to all others; *that* Tartar of white-wine is better than that of red; and *that* ſweet wines yield but very little Tartar, ſince 'tis the plenty of acid parts that afford the biggeſt and fineſt tartareous cryſtals. Yet *Acetum* has no Tartar though it contain a copious *acid* Salt; of which he renders this reaſon, that the Wine whence the *acetum* is made, had already depoſed its tartar; beſides that the alcaliſate parts are wanting, which muſt needs concur to the concretion of Tartar.

He ſubjoyns the various *Uſes* of Tartar; To *Gold-ſmiths*, for purifying and whitening of *Silver*, by boyling it in water and

adding a little Allom to it: To *Chymiſts* and *Phyſitians* for making their *Regulus's*; for the deflagration and ſeparation of Sulphurs; for preparing with the Creme of Tartar their *Tartarum Chalybeatum*, *Antimoniale*, *Emeticum*, *Diureticum*; for making a *Tartarum Vitriolatum*, with Salt of Tartar diſſolv'd in Air, and mixt with Spirit of Vitriol by a high Efferveſcence; for making the *Spiritus vini tartariſatus* by a tincture drawn out of the Alcalizate ſalt of Tartar by Spirit of wine, *&c.*

He concludes this head with directing, how to reduce Salts into Elementary water, viz. by diſtilling in an Alembic, Salt of Tartar diſſolved in the Air *per deliquium*, whence comes a phlegm; and by diſtilling again the remainder diſſolved as before; and by going on ſo, till all be diſtill'd into a phlegm, and there remain at laſt nothing but an uſeleſs Earth.

After this he treats of *Acetum*, and eſteems the beſt way of making it to be, by expoſing it to the Sun-beams, thereby to ſeparate the Spirits, and to open the acid and alcaliſate parts, and to conſume the phlegm by the heat, and thereby more and more to concenter the acid parts: Yet muſt not all the ſpirits avolate; for then from the phlegm which remains after the diſtillation of the Spirit of Wine, *Acetum* would be made; whereas the contrary comes to paſs; and the moſt generous wines (not the ſweet ones, as Italic, Spaniſh, wherein the Alcali exceeds the Acid) afford the beſt Vinegar. The heat that is required to diſſolve the Salts is a gentle and ſlow one, leſt the remaining volatile parts be driven away, and there remain nothing but phlegm.

He ends all by teaching the way of making *Ceruſe* and *Verdigreaſe* of plates of Lead and Braſs; and by enumerating the many other *Uſes* of Vinegar, in fixing the Narcotique power of Opium, in inciding, attenuating, raiſing the ferment of the Stomack, repelling inflammations, reſiſting putrefaction, *&c.*

H. *De Poematum Cantu & Viribus Rythmi.* Oxon. *è Theatro Sheldoniano*, 1673. *in* 8°.

THE Author of this Treatiſe (which is the famous *Iſaacus Voſſius*, though not named in the Title) endeavors to make

make it out, that the Muſick of the Antients is far to be prefer-r'd to that of our Age, foraſmuch as Speech, how powerful ſoever at this day, yet, when put into a Song or rendred Muſical, is not of that efficacy in moving our ſenſes, as it was in times of old. For finding out the Cauſe of which, he obſerves chiefly three things in Singing; the Harmony, the Words, and the Rhythm or Meeter; the Harmony reſpecting the ſound, the Words requiring a diſtinct enunciatiaon for their clear Underſtanding; and the Rhythm conſiſting in a due and well-meaſured motion of the Song. As for the *Harmony*, he acknowledges, that the Moderns have largely handled it, yet without exhauſting the argument. But for the two other parts, he affirms, that they have either totally neglected them, or diſcourſed of them beſides the purpoſe. Which he endeavors to prove from hence, that ſince all ſongs and all harmony, how curious ſo ever, muſt prove but an empty ſound, if the words ſung are not underſtood, nor the motions ſignificant; as they are not in the modern Muſick, contrary to what was moſt carefully obſerved in that of the Antients. Where he appeals to Experience, by which he ſaith it will be found, that ſcarce the tenth part of what is ſung by the Muſitians of this age can be underſtood, and that they by making, contrary to nature, thoſe Syllables long that are ſhort, and thoſe ſhort that are long, and often repeating the ſame words ten times, do ſo diſorder and mangle the genuin manner of pronunciation, that they quite deſtroy the true nature of the ſong. Beſides this, he obſervs, that we labour under another very great defect, which is, that we are altogether deſtitute of the Rhythm, the Soul of Songs. And this is it, *he ſaith*, which hath induced him, to make out in this Exercitation both the nature of the Rythm, and its wonderful power in moving and raiſing the Affections: which with what ſucceſs he hath perform'd, we leave to the judicious to determine.

Mean time, we ſhall here take notice of divers particulars, which our Author lays weight upon; ſuch as are:

1. The Invention, Nature, Neceſſity, Efficacy and Number of *Poetical Feet*, which import different times and meaſures, and by the means of which not only the viſible motions of the Bo-

dy, but alſo the latent ſenſes and any motions of the Mind may be ſo lively repreſented, that there ſhall be almoſt nothing in things, that may not be exhibited by well compoſed Songs and Numbers.

2. The Nature of the *Rythm*, which he defines to be a Syſtem or Aggregate of Feet, the Times of which have a certain proportion to one another; which proportion when 'tis apt, the Verſes or Songs are ſaid to be εὔρυθμοι, if not, ἄρρυθμοι. Wherefore for the concinnity of the Rythm, care muſt be had above all things, not to couple together ſuch feet as differ in their times.

3. The aptneſs of the variety of the Rythm for expreſſing either Majeſty, or Effeminacy, or Vehemency of Paſſions, as Anger, Grief, Love, &c.

4. The cauſe of the joint Loſs of *Muſick* and *Poetry* in *Greece*, where they had their Birth together, which he eſteems to have been the Change of that Tongue and the Proſody thereof; which is the tenor of the voice according to which the Verſe or Song is framed. The ſame Cauſe he aſſigns for the Loſs of the *Latin* Poeſy, and that chiefly upon the invaſion of the Roman Empire by the barbarous Nations.

5. The Preſent Conſtitution of Poetry, which he ſaith is ſo ordered that the ſole Endings, together with a certain and determinate number of Syllables, doe in a manner all that is done; without any care, of what nature and quantity thoſe Syllables be, and conſequently without Rythm, or obſervation of Metrical feet.

6. The Excellency of the true *Greek* tongue above all thoſe, of which there remains any knowledg amongſt us, and the culture of that tongue, rendring it moſt apt not only for expreſſing things, but alſo for framing Songs and Verſes. Where the Author takes occaſion of diſcourſing of divers Tongues, and their Peculiarities, after he had firſt treated of the two things that are to be conſider'd in all tongues, the *Sound* and *Accent*, and enlarged upon the power and efficacy of the Letters both Vowels and Conſonants, that form the Sound. Here he examins eſpecially the Genius of ſeveral Dialects of the *Greek*

tongue

tongue, and obſervs the Faſt and Gravity of the *Spaniſh* language, the Harſhneſs of the *German*, the Softneſs of the *Engliſh*, the Volubility of the *French*; the Elegancy and Neatneſs of the *Italian*, the Hardneſs of the *Polonian*.

7. The Ceſſation, amongſt Muſitians, of that great power of moving the Affections, which he ſaith hath been above a thouſand years agoe, and ever ſince that the uſe and knowledg of the *Rythm* hath ceaſed, which alone, in the Authors opinion, could perform what no Muſitian this day is able to do; whoſe Nature therefore and force he explains at large; ſubjoyning thereto his conſiderations of the Nature and Power of *Sound*, as farr as it concerns this argument, and inferring from thence the far greater force of thoſe *Rythmical* Motions that are conjoyned with Sound, for the raiſing of affections: Obſerving further, that thoſe Motions have ſo great a power, that even without any voice and ſound they can raiſe affections more ſtrongly, than any voice or oration. For the proof of which he alledges the ancient *Pantomimi*, whoſe Feet and Hands he makes no leſs eloquent than the Tongues of Orators; witneſs *Cicero*, who uſed to contend with *Roſcius*, the Stage-player, which of the two ſhould moſt vary the ſame ſentence moſt manner of ways, the one by words, the other by geſtures; which maketh our Author proceed ſo farr, as to affirm, that if we employed as much labour and time in learning the *Pantomimical* Art, as we do in learning a Language, we might poſſibly come to expreſs our mind and thoughts as clearly by that way, as now we do by the aid of a Language: Nor does he think, that Mankind would ſuffer any thing by it, if the peſt and confuſion (*theſe are his own words*) of ſo many tongues were baniſh't, and, in lieu of them, this ſole Art of the *Pantomimes* were known by all mankind, and men explain'd every thing by ſigns, nods, and geſtures; in regard of which he thinks the condition of Brutes to be much better than that of men, ſeeing they ſignify without an interpreter their ſenſe and thoughts more readily, and perhaps better, than any Men can do.

8. The skill of exploring the Internal affections of the Body by *Touch* alone, as we do perceive the External motions by the Eye. Where our Author exceedingly commends the skill of the

Chineſe

Chineſe Phyſitians (which he aſſerts to be undoubtedly true) in finding out not only that the Body is diſeaſed, (which he ſaith is all that our Practitioners know by it,) but alſo, from what Cauſe or from what Part the Sickneſs proceeds. Whereupon he adviſeth, that, as we collect the manners and affections of men from their *Outward* motions perceived by the Eye, ſo we ſhould alſo, for attaining the Knowledge of their *Inward* and more latent affections, enlarge our Senſes and exerciſe that of *Touch*, till we be enabled to diſtinguiſt, and to reduce to certain *claſſes*, the forms and ſhapes of every Pulſe; whereby we would alſo be led to underſtand the power and ſignification of every ſuch motion. And for the reducing of the ſeveral ſorts of Pulſes, he prefers to the method of *Galen*, (who, he thinks, hath rather provoked then ſatisfied our curioſity in his 15 Books of the Nature and Differences of Pulſes) that of *Herophilus*, of whom he affirms that he hath tied the ſeveral manners of the Pulſe to Numbers or Metrical feet; the names and powers of which if they were as well known to Phyſitians, as they are to Muſitians and Poets, it would, in his judgement, be exceedingly beneficial for the Life and Health of man. For the encouragement whereof he repreſents, that, whereas there is not any Kind of motion, which is not to be found in the Muſical feet, it would coſt no great pains, according to thoſe to deſcribe the Motions of the Arteries; nor doth he think it very difficult, by uſe and exerciſe to come to know and to diſtinguiſh by Touch even the compound and diſcordant Pulſes. In ſhort, to make our ſelves Maſters in this skill, he would have us to labour ſo long in exploring the nature of mens Pulſes, till they become ſo well known and ſo familiar to us, as a Harp or Lute is to the Players thereon; it not being enough for them to know, that there is ſomething amiſs which ſpoileth the tune, but they muſt alſo know what String it is which cauſeth that Fault.

On this occaſion the *Publiſher* thinks it will not diſpleaſe the Reader here to give him notice, that he lately ſaw a letter written from *Java* in the Eaſt-Indies, mentioning an Indian Treatiſe, much diſcourſed of, Concerning the *Art and Method of knowing Diſeaſes and their Events by the Sole beating of the*

the Pulſe: And that ſome Curious perſons in that Iſland had already written to ſome Religious men in *China*, deſiring them to ſpare no pains in procuring it: To promote which, a ſumm of mony had been a while ago ſent thither for a reward to the Tranſlators. Further, that thoſe Perſons in *China* had promiſed to imploy all their intereſt there of doing the thing, as that, which exceedingly tends to the relief of mans health and the Comfort of their Life.

9. The Contemptibleneſs of the Modern way of Muſick, which to him is ſuch, that he ſaith, there is hardly ſo much as the ſhadow of the Priſtine Majeſty of it remaining; wondering that thoſe, who in this and the former age have written of Muſick, have written nothing of the *Rythme*, or have done it ſo, that they ſeem to have been altogether ignorant of what it is; regarding nothing but to pleaſe the Ear: Whereas, to affect the mind, 'tis neceſſary the ſound ſhould ſignifie what may be underſtood by the mind, without which there can be raiſed no true pleaſure, nor any ſtrong affection. In a word, he affirms, that if without partiality we compare the Ancient Muſick with the Modern, and conſider the Effects of both, we muſt either acknowledge the ignorance of the Modern Muſitians, or evince to be falſe what the Ancients have delivered of the power and efficacy of their Muſick.

10. The Excellency of the *Chineſe* Muſick, though that people doe complain of the loſs of their antient way of Singing, which if they doe Juſtly, our Author ſcruples not to affirm, that their Muſick muſt have been divine, ſeeing the remainders of it are ſo excellent, that they may eaſily ſilence all the Muſick of Europe.

11. The rare contrivance for rendring even and ſtrong ſounds, of the Old Roman *Hydraulick Organ*, deſcribed by *Hero* and *Vitruvius*, and explained by our Author, and by him declared to excel our Organs, yielding an unequal and weak blaſt.

12. The Art of the Ancients of making ſuch *Tibiæ* or *Pipes* of ſo many different forms and figures, as there are kinds of affections concerning which he affirms, that there is none to be found this day, that do ſo much as know, how to make ſuch

Pipes

Pipes that are able to produce ſuch motions; Since our modern Artificers, in his opinion, do fail not only in the matter, of which thoſe inſtruments are to be made, but alſo in the proportion, which is to be obſerved in their form: Foraſmuch as 'tis now commonly thought, that, there being two *Tibiæ* of the ſame length, but of different thickneſs, the thicker of the two will yield a graver ſound than the ſlenderer; which he ſaith, is contrary to Experiment; by which he alledges to have found, that the thicker the *Tibiæ* are, the acuter ſound they yield, and the ſlenderer, the graver, provided you keep the ſame length. Where he undertaketh to correct *Galilæus* and *Des-Cartes* concerning this particular. He concludes all with this admonition, that if any have a mind to reſtore the Antient Muſick, or to rectify the Modern, he muſt by all means imitate the diligence of the Antients in reducing all ſyllables to a certain quantity, and in reſtoring Metrical Feet, which, *he ſaith*, the Modern Muſick is almoſt altogether deſtitute of.

LONDON,
Printed for *John Martin*, Printer to the *Royal Society*. 1673.